

## Titanium Niobium Oxide

Catlog Number: BMAM-0014

### • Description

High-capacity TNO anode material offering safe operation with a higher voltage plateau to prevent lithium dendrite formation during fast charging.

### • Basic Information

Chemical Formula:  $\text{TiNb}_2\text{O}_7$

Appearance: White/Grey Powder

D50 Particle Size: 1 - 5  $\mu\text{m}$

Tap Density:  $\geq 1.2 \text{ g/cm}^3$

BET Surface Area: 5.0 - 10  $\text{m}^2/\text{g}$

1st Discharge Capacity:  $\geq 260 \text{ mAh/g}$

1st Coulombic Efficiency:  $\geq 90\%$

Carbon Content: N/A

Active Metal Content: Nb:  $\sim 60\%$

Ash Content:  $\leq 0.10\%$

Moisture Content:  $\leq 0.05\%$

pH Value: 7.0 - 9.0

Iron (Fe) Impurity:  $\leq 25 \text{ ppm}$

True Density: 4.1 - 4.3  $\text{g/cm}^3$

Compaction Density:  $\geq 2.4 \text{ g/cm}^3$

Crystal Structure: Monoclinic

Surface Coating: Optional C

Magnetic Impurities:  $\leq 50 \text{ ppb}$

Electronic Conductivity:  $\sim 10^{-5} \text{ S/cm}$

Voltage Range: 1.0 - 3.0 V

Purity:  $\geq 99.9\%$

Primary Application: Safe fast-charge LIB

Thermal Stability: Very High

Cycle Life:  $\geq 3000$  cycles

 For Research or Industrial Raw Materials, Not For Personal Medical Use!